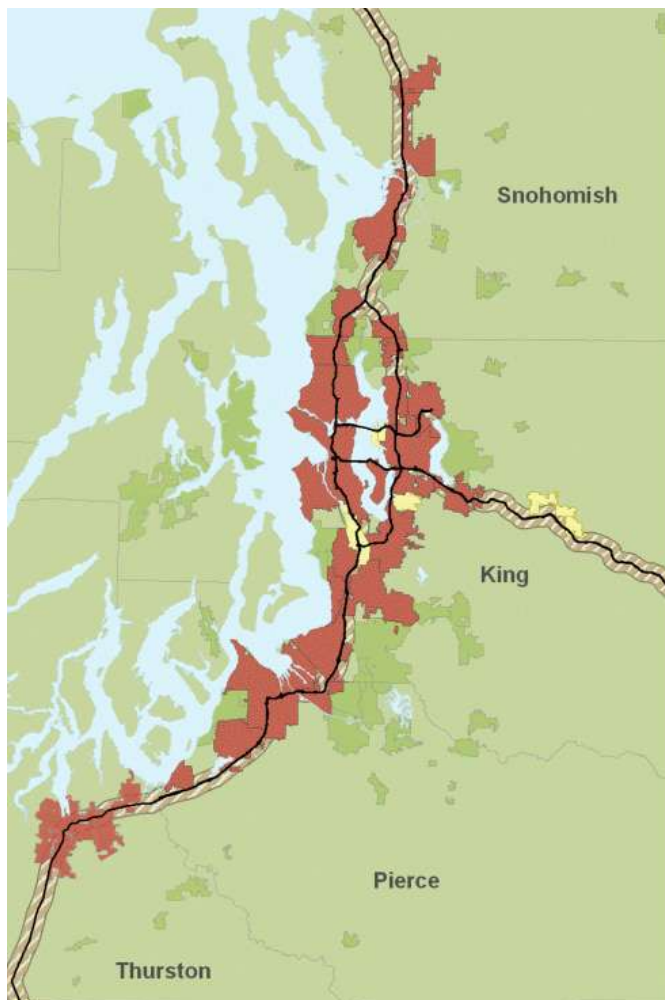


PLANNING FOR ELECTRIC VEHICLE INFRASTRUCTURE (EVI)

Charging Stations, Battery Exchange Stations and Your Local Code

In 2009, the Washington State Legislature recognized that support for electric vehicles was both an economic and environmental priority. A new law, [2SHB 1481](#) was passed, crafted to support and encourage the use of electric vehicles, and to facilitate the deployment of the supporting charging infrastructure. Sections 9 through 13 of the bill require all cities and counties in Washington State to allow electric vehicle battery charging stations as a use in all zones except for residential, resource, or critical areas by July 1 of 2010 or 2011, depending on location and governance. There is no prohibition in residential, resource or critical areas, but there is no requirement to allow the infrastructure in these areas.

Cities adjacent to I-5, I-405, I-90, and SR-520 must also allow battery exchange stations, and counties must allow exchange stations in areas within 1 mile of these corridors. These requirements for local governments planning under the GMA are codified in RCW 36.70A.695, and are codified in other sections of state code for other local governments. The maps and text below detail the timelines and requirements.



For all areas except those zoned for residential, resource use or critical areas:



July 2010- Allow EV Infrastructure

Cities: Arlington, Bellevue, Bothell, Des Moines, DuPont, Everett, Federal Way, Fife, Issaquah, Kent, Kirkland, Lacey, Lakewood, Lynnwood, Marysville, Mercer Island, Milton, Mountlake Terrace, Olympia, Redmond, Renton, Sea Tac, Seattle, Shoreline, Tacoma, Tumwater
Counties: King, Pierce, Snohomish, and Thurston, within a one-mile buffer of I-5, I-405, SR 520 and I-90



July 2011- Allow EV Infrastructure

Cities: All cities in King, Pierce, Snohomish and Thurston counties adjacent to I-5, I-90, I-405 and SR-520 under 20,000 population, and all cities in the rest of the state adjacent to I-5 and I-90.
Counties: Adams, Clark, Cowlitz, Grant, Kittitas, Lewis, Lincoln, Skagit, Spokane and Whatcom, within a 1 mile buffer of I-5 and I-90



July 2011- Allow Battery Charging Stations

Remainder of cities and county unincorporated areas in Washington State



ELECTRIC VEHICLE INFRASTRUCTURE

Three levels of battery charging stations are available:

Level 1, uses 110 volts and is similar to a regular household outlet. It can charge an electric vehicle battery in 14-16 hours.

Level 2, uses 220 volts and is similar to an electric oven or dryer outlet. It can charge an electric vehicle battery in 4-6 hours.

Level 3 rapid charging stations, also called DC fast charge, require 440 volts and can fully charge an electric vehicle in less than 30 minutes.

Examples of Private and Public Battery Charging, and Battery Exchange Stations



A wall-mounted Level 2 home charging station in a carport. Outdoor home charging stations can also be Level 1 and may not have to be covered. *Photo courtesy of Plug In America.*



A typical Level 2 pedestal-style charging station in a surface parking lot. *Photo courtesy of ECotality.*



Rapid Charging Station Vacaville, CA *Photo: David Dickey*



Battery Exchange Station in Tokyo *Photo: Better place.*

TECHNICAL ASSISTANCE

The Puget Sound Regional Council and The Washington State Department of Commerce collaborated to produce a model ordinance entitled [*Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State*](#) in July 2010. This model includes example language and guidance for cities and counties as they address the requirement to “allow electric vehicle infrastructure. The document covers zoning, on-street and off-street signage, charging station design standards, parking enforcement, accessibility for all users, SEPA exemptions, and more. Appendices include installation guides and other tools for local government use.

[Model Ordinance](#)

Appendix A: 2SHB 1481 as Codified in RCW ([PDF](#))

Appendix B: Model Installation Guides for Charging Stations ([PDF](#) | [Word](#))

Appendix C: Model EV Charging Station Installation Checklist ([PDF](#))

Appendix D: Research Memoranda ([PDF](#))

“Allowing” Electric Vehicle Infrastructure (EVI)

RCW 36.70A.695 does not require the cities and counties take legislative action to allow electric vehicles. City and county codes may already allow electric vehicles with existing zoning and administrative tools. In cases where local codes are not clear regarding EVI, some cities and counties are considering a code interpretation as an interim measure, should a request for EVI be submitted before revisions to the code and if necessary, the comprehensive plan.

As cities and counties submit updated comprehensive plans and development regulations for 2014-2017 periodic updates, they will be required to indicate how RCW 36.70A.695 – the requirement to allow electric vehicle infrastructure – is met. Commerce recommends that local governments adopt as much of the model ordinance as they are comfortable with, to support consistent standards, signage, and permitting of EVI across the state.

Some simple code changes are likely needed such as:

- Adopting electric vehicle-related definitions
- Adopting signage and design standards for off-street parking.
- Adding EVI to permitted uses in the zoning code, either as an ancillary use or a principal use in all zones, except residential, resource and critical areas. There is no statutory prohibition on EVI in those zones, however state law does not require that EVI be allowed. Many communities are choosing to allow EVI as an ancillary use to a principal use in almost every zone.

Other issues may require a review of comprehensive plan policies and some discussion on local choices regarding electric vehicle infrastructure.

- Do comprehensive plan policies encourage electric vehicle use and support proposed code changes? Are new comprehensive plan policies in transportation, energy or sustainability elements needed?
- Should the community provide incentives to developers to provide “plug-in ready” single or multifamily homes? Should EVI be required as new homes are built?

- What provisions are needed for EV owners where no off-street parking is available? Should communities develop a comprehensive strategy to address electric vehicle infrastructure.
- How will communities address on-street public electric vehicle charging? How should parking provisions be enforced?
- Does allowing electric vehicle charging stations downtown conflict with goals to reduce traffic congestion or are there places where this is appropriate?

LOCAL EXAMPLES:

[City of Lacey Adopted Ordinance Link](#)

[City of Issaquah Ordinance Link](#)

FREQUENTLY ASKED QUESTIONS:

Q: The RCW 36.70A.695 says that cities must allow battery charging stations in all zones except residential, resource lands and critical areas. Our city equates a battery charging station with a gas station and we are not excited about allowing battery charging stations in those commercial zones, such as downtown, where gas stations are not allowed. Do we have to allow these in all zones? How should we handle that?

A. Some cities are allowing EVI as an accessory use in all zones. This means that charging stations would be allowed as an accessory to a residential, commercial or parking use. A battery exchange station could be permitted as an accessory to a principal use such as a gas station, where those uses are allowed.

Q I know that RCW 43.01.250 specifically authorized the state to pay for EV charging at state locations (public and private charging). Are you aware of any interpretation that would extend this authorization to cities? Or better yet, any direct authorization for cities to do this? I would appreciate any guidance you have. I can see the concern for the Gift of Public Funds issue being a barrier as we move forward on this front and want to see if we can address it sooner than later.

A. RCW 43.01.250 specifically authorized the state to purchase power to recharge public and private electric vehicles at state offices where the public and private vehicles are used for state business, or are commute vehicles. There is no parallel authorization for cities to do the same. The constitutional prohibition of gifting or lending of public funds could be an issue. This issue is addressed on page 10 of the model ordinance, and discusses *Citizens Protecting Resources v Yakima County*. The court found that no gift had been made if a fundamental purpose of government was carried out. In this case, cleaner air and water could be such a purpose; however, this has not been tested for EV charging.

OTHER INFORMATION

Department of Commerce – [Electrification of Transportation and EV Charger Siting Project](#)

Municipal Research and Services Center [Web Page on Electric Vehicles](#)

[Zoning Practice](#) July 2010 *Electric Vehicles: Is Your Community Connected?* by Timothy M. Bourcie – (APA login required).

[Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State](#) and its appendices have significant research and resources embedded within the document.

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